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| 10/063,559      | 05/02/2002  | David C. Kulp        | 3291.7              | 9768             |

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EXAMINER

SMITH, CAROLYN L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1631

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/063,559

**Applicant(s)**

KULP ET AL.

**Examiner**

Carolyn L Smith

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19,49-51 and 61-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,49-51 and 61-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6 pages.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

Applicants' elections without traverse of Specie A (a first set of data which is biological sequence) and Specie D (a second set of data which is protein information) with a protein domain subspecie, filed 6/22/04, are acknowledged.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The present title is directed to method, system, and computer software for providing a genomic web portal, whereas in contrast the elected claims are specifically directed to a method and system for providing information related to one or more probe sets.

The information disclosure statements, filed 5/29/02, 10/6/03, 3/2/04, have been considered by the Examiner.

Claims herein under examination are 19, 49-51, and 61-66.

### ***Specification***

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code, such as in paragraphs 0051 and 0052. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

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***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19, 49-51, and 61-65 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter. As written, these claims appear to be directed to a method and system that lacks any physical result performed outside of a computer.

As stated in MPEP § 2106, (IV)(B)(2)(b), to be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in MPEP § 2106 (IV)(B)(2)(b)(i)), or (B) be limited to a practical application within the technological arts (discussed in MPEP § 2106 (IV)(B)(2)(b)(ii)).

As stated in MPEP § 2106 (IV)(B)(2)(b)(i), the independent physical acts may be post- or pre-computer processing activity as described below:

A process is statutory if it requires physical acts to be performed outside the computer independent of and following the steps to be performed by a programmed computer, where those acts involve the manipulation of tangible physical objects and result in the object having a different physical attribute or structure. *Diamond v. Diehr*, 450 U.S. at 187, 209 USPQ at 8. Thus, if a process claim includes one or more post-computer process steps that result in a physical transformation outside the computer (beyond merely conveying the direct result of the computer operation), the claim is clearly statutory.

Another statutory process is one that requires the measurements of physical objects or activities to be transformed outside of the computer into computer data (*In re Gelnovatch*, 595 F.2d 32, 41 n.7, 201 USPQ 136, 145 n.7 (CCPA 1979) (data-gathering step did not measure physical phenomenon); *Arrhythmia*, 958 F.2d at 1056, 22 USPQ2d at 1036),

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where the data comprises signals corresponding to physical objects or activities external to the computer system, and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities. Schrader, 22 F.3d at 294, 30 USPQ2d at 1459 citing with approval Arrhythmia, 958 F.2d at 1058-59, 22 USPQ2d at 1037-38; Abele, 684 F.2d at 909, 214 USPQ at 688; In re Taner, 681 F.2d 787, 790, 214 USPQ 678, 681 (CCPA 1982).

As stated in MPEP § 2106 (IV)(B)(2)(b)(ii), the computer-related process may be limited to a practical application in the technological arts as described below:

There is always some form of physical transformation within a computer because a computer acts on signals and transforms them during its operation and changes the state of its components during the execution of a process. Even though such a physical transformation occurs within a computer, such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process. What is determinative is not how the computer performs the process, but what the computer does to achieve a practical application. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036.

Claims 19, 49-51, and 61-65 do not fulfill either of these statutory requirements and are therefore rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter.

Claims 19, 49-51, and 61-65 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter. As written, the claims appear to be directed to a system that merely manipulates numbers, abstract concepts or ideas, or signals representing any of the foregoing.

As stated in MPEP § 2106, (IV)(B)(1), if the “acts” of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59.

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Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.

In practical terms, claims define nonstatutory processes if they:

- consist solely of mathematical operations without some claimed practical application (i.e., executing a “mathematical algorithm”); or
- simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.

Claims 19, 49-51, and 61-65 do not fulfill any of these statutory requirements and are therefore rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter.

### ***Claims Rejected Under 35 U.S.C. § 112, Second Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 49-51, and 61-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claims 19, 49, 51, and 65 recite the phrase “related to” which is vague and indefinite. It is unclear what criteria and to what extent these criteria must be met to be considered related. Clarification of the metes and bounds of these claims via clearer claim wording is required.

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Claims 50, 61-64, and 66 are also rejected due to their direct or indirect dependence from claims 19 and 49.

Claim 49 recites the phrase “associated with” which is vague and indefinite. It is unclear what criteria and to what extent these criteria must be met to be considered associated.

Clarification of the metes and bounds of the claim via clearer claim wording is required. Claims 50-51 and 66 are also rejected due to their direct or indirect dependence from claim 49.

### ***Claim Rejections – 35 USC §102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19, 49-51, and 61-66 are rejected under 35 U.S.C. 102(e)(2) as being anticipated by Maslyn et al. (P/N 6,408,308).

Maslyn et al. disclose a system and method for generating, analyzing, and storing datasets from probe sequences (title). Maslyn et al. disclose a processing system with procedures and tables that store information identifying element data from microarrays (abstract). Maslyn et al. disclose microarray design information includes location and sequence information (first data set) of the array elements (col. 2, lines 20-25). Figure 9 discloses a user defined query (530) where selected datasets (i.e. first data sets) are retrieved and provided based on user defined

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selection (531) followed by comparison (correlation) to other datasets (532/534/536/544/546) (i.e. second data sets) including filters to select specified elements of the dataset such as protein function (542 and col. 12, lines 11-17), ending in a viewing of the data (538). Maslyn et al. disclose displaying and comparing data that is stored in external datasets (col. 12, lines 26-31). Figure 1 discloses the use of a sequence database. Maslyn et al. disclose selecting any combination of query criteria by selecting data across various categories, such as transcript, microarray, sample, and data source (col. 12, lines 33-38). Figure 10A discloses query parameters such as a BLAST search (593) (sequence comparison), molecular function and structural proteins (594) (protein information) (col. 11, lines 39-46 and col. 12, lines 1-2). Merriam-Webster online dictionary defines domain as “a region distinctively marked by some physical feature”, such that a structural proteins represent information related to protein domains, as stated in instant claims 49, 51, 63, and 65. Maslyn et al. disclose a protein function menu to allow users to select elements by their associated function (col. 14, lines 34-36) which represents a correlation (“establish a mutual or reciprocal relation between”, definition of correlate according to the Merriam-Webster online dictionary) between the microarray gene data (first data set) with the protein domain information (second data set). Figure 10B demonstrates datasets the user will define (602) and datasets the user will view (608). Maslyn et al. disclose generating data from a microarray composed of nucleic acid probe sequences representing genes or gene fragments (biological sequences) (col. 4, lines 40-43). Maslyn et al. disclose a manufacturer microarray with identification of the sites having probes corresponding to a particular transcript (col. 4, lines 49-52) which represents a probe set that is capable of identification of a biological molecule, as stated in instant claim 19. Maslyn et al. disclose



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providing probes for up to about 10,000 genes (col. 4, lines 52-56). Maslyn et al. disclose correlating a particular gene (biological sequence) or elements on the microarray with the probe design using microarray layout data and design data files for summarization of data (col. 6, lines 22-28). Maslyn et al. disclose an information processing system storing expression data for polypeptide sequences (col. 2, lines 36-39). Maslyn et al. disclose a network server, UNIX operating system, application software module, and a relational database management system (RDBMS) wherein data pass to JAVA classes such that results are displayed to the client computer (user) (col. 3, lines 39-41 and col. 4, lines 22-26; Figure 1) which represent an output manager to provide data to user as well as an input manager, determiner, and correlator.

Thus, Maslyn et al. anticipate the limitations in claims 19, 49-51, and 61-66.

### ***Conclusion***

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform to the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The CM1 Fax Center number is (703) 872-9306.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner Tina Plunkett whose telephone number is (571) 272-0549.

July 6, 2004

*Ardin H. Marschel* 7/22/04  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER